

Session 6

Ecosystem Services as a Bridge between Disciplines



Session 6. Ecosystem Services as a Bridge between Disciplines



SWAN INTERNATIONAL CONFERENCE
OPEN KNOWLEDGE: BRIDGING PERSPECTIVES
TO ADDRESS WATER CHALLENGES
February 16-17, Tucson, AZ (USA)

Schedule

1:30 Introduction – S. Nedkov

Invited talks

1:40 Humans, nature and ecosystem services – closing the supply-demand gaps – B. Burkhard

2:20 Integrating cultural and biophysical ecosystem service assessment and exploring their incorporation into Federal planning efforts – D. Semmens

3:00 Panel Discussion

3:30 Coffee break

3:40 Breakout groups

4:20 Final discussion

4:30 End of the session

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The **main objective** of this session is to discuss the ways in which the **ES concept bridges disciplines** and the ways such bridges **support the management** of the human-environmental system.

Session is convened by:

Stoyan Nedkov, Mariyana Nikolova , Kremena Boyanova , Rositsa Yaneva,
Tania Trenkova (NIGGG-BAS), Thomas Meixner (UofA)

Ecosystem services concept in SWAN

Ecosystem services are the contributions of ecosystem structure and function, in combination with other inputs, to human well-being

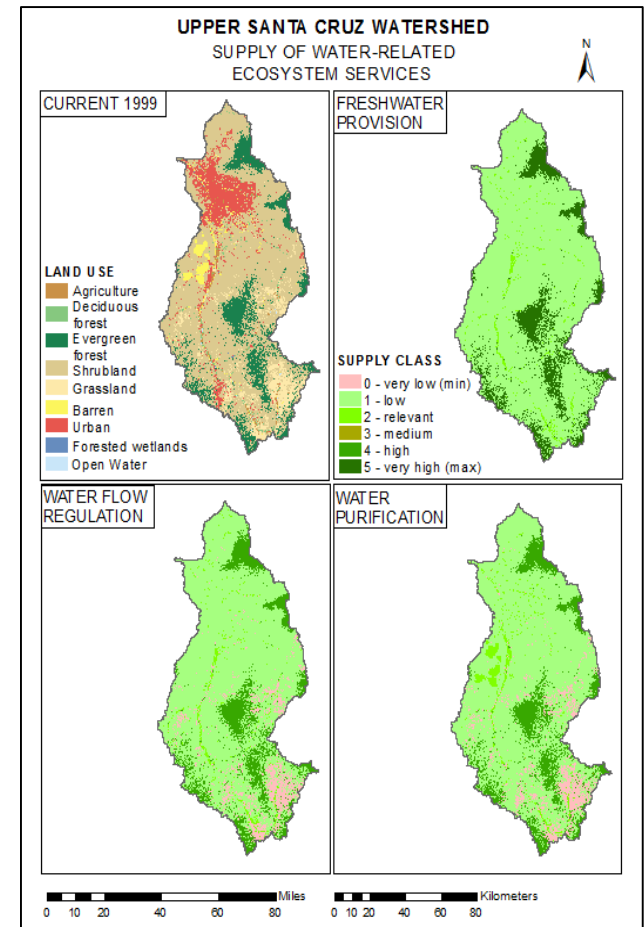
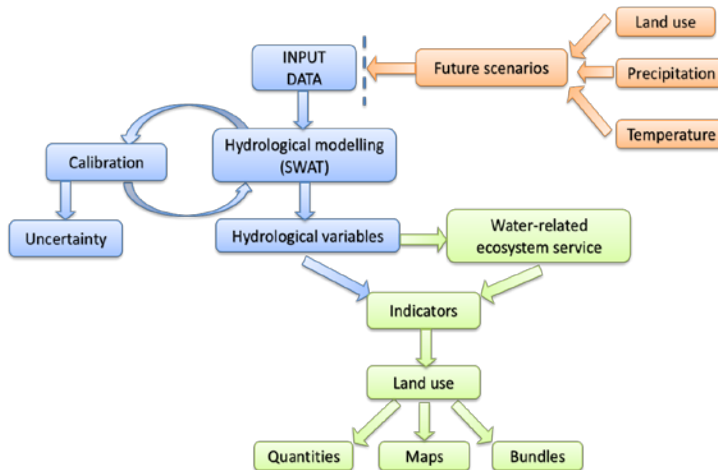
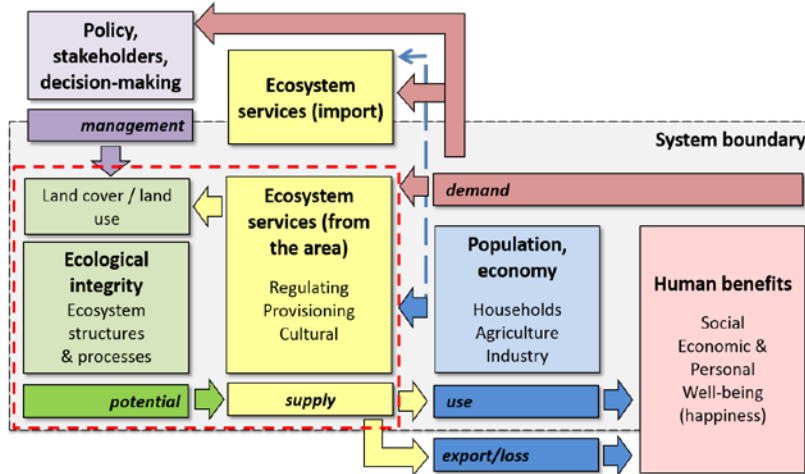


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Ecosystem services concept in SWAN

Quantification and Mapping of Water-related Ecosystem Services in the Upper Santa Cruz Watershed, Arizona and Sonora

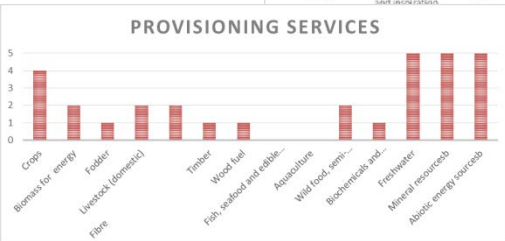


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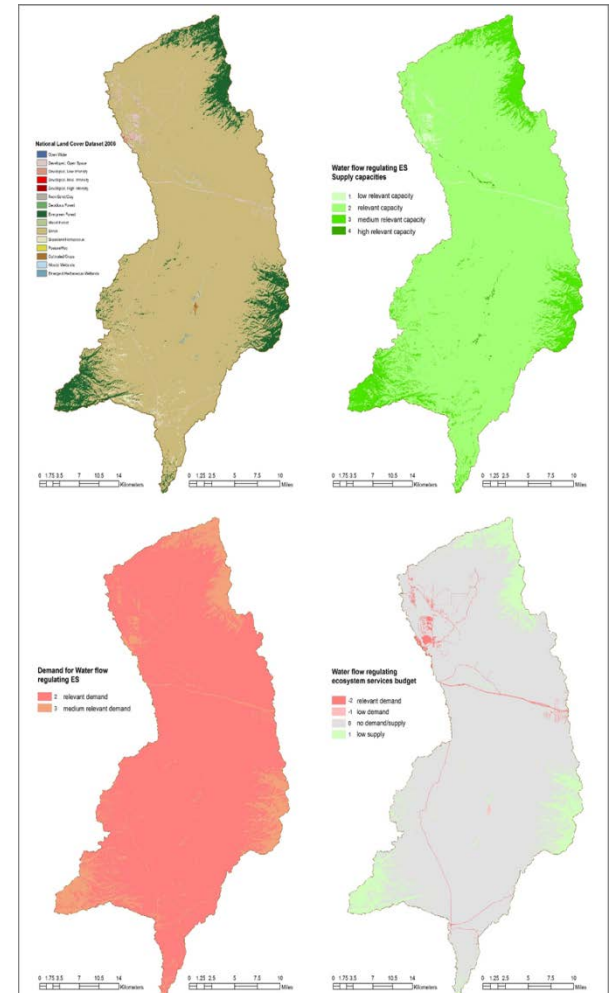


Ecosystem services concept in SWAN

MAPPING ECOSYSTEM SERVICES SUPPLY AND DEMAND FOR POLICY AND PRACTICE – QUALITATIVE ASSESSMENT IN PANTANO WASH WATERSHED (TUCSON BASIN, AZ)



NLCD 2006	regulating services								provisioning services			cultural services					
	Local climate regulation	Air quality regulation	Water flow regulation	Water purification	Erosion regulation	Natural hazard protection	Pollination	Regulation of waste	Crops	Freshwater	Mineral resources	Abiotic energy sources	Recreation and tourism	landscape aesthetic, amenity and inspiration	Knowledge systems	Cultural heritage and cultural diversity	Natural heritage and natural diversity
Open Water	3	2	4	2	1	3	2	3	1	3	1	2	4	4	4	3	4
Developed, Open Space	2	1	1	1	1	1	1	1	1	1	1	3	3	2	3	4	2
Developed, Low Intensity	2	1	1	1	1	1	1	1	1	1	1	3	3	2	3	4	2
Developed, Med. Intensity	2	1	1	1	1	1	1	1	1	1	1	3	3	2	3	4	2
Developed, High Intensity	2	1	1	1	1	1	1	1	1	1	1	3	3	2	3	4	2
Rock/Sand/Clay	1	1	1	1	1	1	1	1	0	1	3	2	2	3	3	1	3
Deciduous Forest	3	3	4	3	4	3	3	2	1	3	1	1	4	4	3	2	4
Evergreen Forest	4	4	3	3	4	3	3	2	1	3	1	1	4	4	3	3	4
Mixed Forest	3	4	4	3	4	3	3	3	1	3	1	1	4	4	3	3	4
Shrub/Scrub	2	2	2	2	3	2	3	2	1	2	1	1	2	3	3	2	3
Grassland/Herbaceous	2	2	3	2	3	2	3	2	2	2	1	1	3	3	3	2	3
Pasture/Hay	2	2	2	1	2	1	2	1	2	1	1	1	1	2	2	2	2
Cultivated Crops	2	1	2	1	2	1	2	1	4	1	1	1	1	1	3	2	1
Wetlands	3	2	4	4	3	3	3	4	1	4	1	2	4	4	4	3	4
Emergent Herbaceous Wetlands	3	2	4	4	3	3	3	4	1	4	1	2	4	4	4	3	4



Main questions

- How do ES tools support decision-making and inform the general public?
- What applications has the concept found in USA and EU?
- How does it support the Trans-Atlantic dialogue on environmental issues?
- Does the ES concept improve communication between disciplines or it is simply a tool for analysis?
- What are the limitations of the concept and the risks for misleading outputs?

Additional questions

- What are the strengths and weaknesses of the ES approach as a tool for water and environmental studies?
- What are the advantages and disadvantages of its application in practice?
- How are models and maps of ES good tools for better interaction with decision-makers?
- What are the differences between EU and US in the implementation of the ES concept in policy and decision making? Does ES concept serve as bridge between continents (USA-EU)? How?
- How does ES concept serve as bridge between disciplines?
- What is the future of ES in science and practice?

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Keynote speakers



Benjamin Burkhard
Institute for Natural Resource Conservation
Department of Ecosystem Management



Darius Semmens
Research Physical Scientist
Geosciences & Environmental Change Science
Center - U.S. Geological Survey

Breakout groups

1. ES and education – preparing the new specialists
2. ES as bridge between disciplines – natural science perspective
3. ES as bridge between disciplines – social science perspective
4. ES as tool to support policy and decision-making
5. ES as a global tool - bridge between continents

Intended outcomes

- Enhanced communication and collaboration among natural scientists, social scientists, stakeholders and citizens
- Group-authored white paper
Work title: *Ecosystem Services as a Bridge between Disciplines*
- Others?